

C. H. Amidon,

Wringer,

Nº 64,932,

Patented May 21, 1867.

Fig. 2

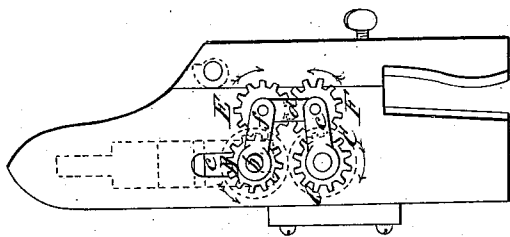
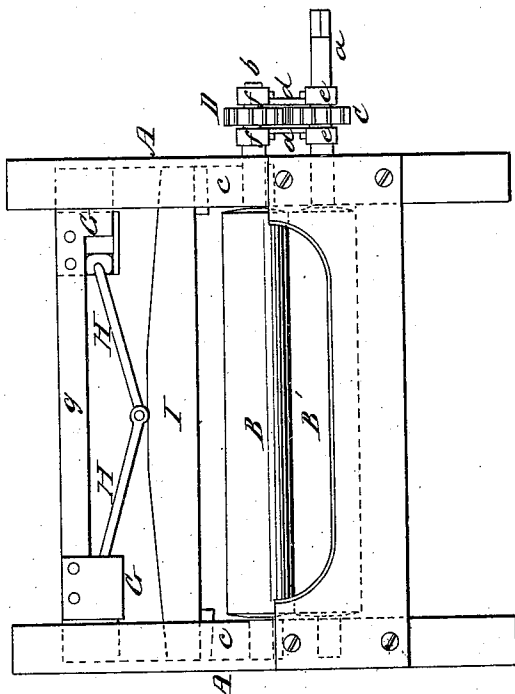


Fig. 1



Witnesses
Guy C. Humphries
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by
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United States Patent Office.

CHARLES H. AMIDON, OF GREENFIELD, MASSACHUSETTS, ASSIGNOR TO BAILEY WASHING AND WRINGING MACHINE COMPANY, OF WOONSOCKET, RHODE ISLAND.

Letters Patent No. 64,932, dated May 21, 1867.

IMPROVED CLOTHES-WRINGER.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, CHARLES H. AMIDON, of Greenfield, in the county of Franklin, and State of Massachusetts, have invented new and useful improvements in Machines for Wringing Clothes; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is a front elevation; and

Figure 2 an end view of my machine.

The nature of my invention consists in so arranging a wringing machine having geared rollers composed of or covered with rubber or similar elastic material or compound impervious to water, as that the roller, which yields or gives to the varying bulk of articles that pass between it and the roller with fixed bearings, may move perpendicularly without strain upon the gearing which connects the rollers, and without causing the least alteration in the relative positions of the gearing-wheels with their immediate neighbors, while at the same time, from the peculiar construction of a self-adjusting spring, the pressure of the roller upon the clothes is kept so nearly uniform during all degrees of elevation or depression of the roller that it may be considered practically constant.

In the drawings, A A are the supports or standards of the rollers B B', firmly braced together and arranged to be attached to a tub or other vessel to catch the water as it is pressed from the clothes. The shaft *a* of the fixed roller B' is in permanent bearings in the supports A, and one end projects beyond the support, and has a fixed cog-wheel, C, upon it. The shaft *b* of the movable roller B has its bearings in movable journal-boxes *c c*, fitted to slide freely up and down in slots or grooves in the supports A. It also projects at one end beyond the journal-box, and has a fixed cog-wheel, D, upon it, immediately over but not meshing with the cog-wheel C. The wheels C and D are less in diameter than the rollers, so that they may not come in contact when the rollers are together. Two other cog-wheels, E and F, of the same size and pitch with C and D, gear with each other, and are kept in a constant relation with each other by links or straps of metal, *d*, connecting their axles, on which they may turn freely. The wheel F gears also with the wheel C, and the wheel E with D, and the wheels thus paired, D with E and C with F, are kept in their relations with each other as pairs by links or straps of metal, *e*, connecting the axles of C and F, and similar straps, *f*, connecting the axles of D and E. It will be seen that the straps or links *d e f* thus form a chain having its points of flexion at the axes of the cog-wheels, and which may be straightened, if necessary, so as to bring all the centres of the wheels in a perpendicular line, while their connection as gears will be undisturbed, and motion given to one will be communicated to the rest. If the rollers B B' be forced apart there will be no tendency in the journal-box *c* of the movable roller to hug or jam against one side of the slot or groove in which it slides, but it will move in a perfectly perpendicular direction, separating to a greater distance the wheels C and D, while the straps *e f*, swinging around the centres of C and D, act as toggle-joint levers, and as if they were jointed to the centre instead of the ends of the strap *d* at the axles of E and F, and draw these in between the wheels C and D, towards a line passing through their centres, without getting out of gear, and without ceasing to communicate motion from the shaft *a* to the shaft *b*, the power expended in thus moving the wheels and preserving their contact being only so much as is necessary to overcome the friction of the wheels in their bearings, and upon each other. The arrows indicate the direction of motion in the wheels and rollers, which may be given by applying any power to the shaft *a*. G G are two spring-pockets firmly attached to the upper parts of the supports A, and secured together by a brace, *g*. In these pockets are the springs, which may be of rubber or other suitable material, and of any desired form. In the drawing, one of the boxes is shown as partially broken away to show the spring within it. These springs each receive the end-thrust of a lever, H, extending from the springs obliquely down to a line passing vertically through the centre of the distance between their ends, where they meet, and may be jointed together, or be fitted to each other by a cylinder and concave without a joint pin, and where they press on the centre of the top of stout beam I, extending across from one journal-box *c* to the other, on which its ends rest and are brought to the proper degree of pressure or resistance to the springs and levers H H by keys or wedges, or an equivalent device. As the rollers are forced apart the beam I is raised, and the joined ends

of the levers H being also raised, the upper and outer ends of the levers are forced against the springs in the pockets G. As the levers H H approach a horizontal position they would offer less and less resistance to the force separating the rollers, but that the resistance of the springs in the pockets G is increased as they are compressed, and the result is a uniform rate of resistance to the said force through all the vertical space in which it may be exerted on the rollers. The levers are kept from arriving at a dead-point, where all the pressure of the springs would be exerted against them only, by so arranging the beam I that it may be stopped in its rise before the levers H have reached a horizontal position.

Having thus fully described my invention, what I claim therein as new, and desire to secure by Letters Patent, is—

1. The cog-wheels C D E F, connected together at their axles by the straps or links *d e f*, so as to form a flexible train of gearing between, and in combination with, the rollers B B' of a clothes-wringing machine, substantially as and for the purpose set forth.

2. The levers H H, arranged substantially as set forth, to be in opposition to a resisting force exerted by a spring or springs, or their equivalent.

CHARLES H. AMIDON.

Witnesses:

AUSTIN DE WOLF,
LEVI J. GUNN.